

REMARKS

The office Action mailed September 12, 2002 has been received and carefully studied. Claims 2, 7-15, 21, 23-24, 28, and 30 have been canceled and new claims 31-33 have been added. Claims 1, 3-6, 16-20, 22, 25-26, 29, and 31-33 are in the application. Reconsideration is respectfully requested.

The present invention is generally directed to a portable data collection device which, in various embodiments, can include a display, manual data entry circuitry, and a processor for receiving entered data and for controlling the display. A first wireless communication circuit can be used for receiving data using a first protocol over short range from at least one data transmitting unit. A second wireless communication circuit can using a second protocol can be used for transmitting and receiving data over a long range from a host.

Claim Amendments Made:

The following amendments have been made:

The specification has been amended to a reference to a "bar code" instead of a "bar cod".

Claim 1 has been amended to include the subject matter of canceled claim 2. Claim 3 has been amended to be consistent with this change. Claim 16 has been amended to include the subject matter of cancelled claims 21, 23 and 24. Claims 26 and 27 have been amended to be in independent form and to include the subject matter of (unamended) claim 16. In addition claims 7-15, 28, and 30 have been canceled to focus the prosecution on particular aspects of the invention and to remove issues from consideration at this time.

Rejection of the Claims under § 102:

The Examiner has rejected claims 1, 4-6, 16-19, 22, and 25-30 under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 5,873,070 to Bunte et al.

Claim 1 has been amended to include the subject matter of claim 2, which the Examiner has admitted is not disclosed in Bunte. Claim 16 has been amended to include the subject matter of claims 21, 23, and 24, which the Examiner has admitted is not disclosed in Bunte.

Accordingly, the rejection of claims 1, dependent claims 4-6, claim 16, and dependent claims 17-19, 22, and 25 as being anticipated by Bunte has been traversed and should be withdrawn. (The claim rejections under §103 are addressed separately below.)

Claim 26 stands rejected as being anticipated by Bunte. The Examiner contends that Bunte discloses a networked system and that a network must operate according to a network protocol. The Examiner then states that well known protocols provide time limits for communication messaging and that communication can be dropped if a message is not received, presumably within a given time limit. (Office Action, p. 4).

Even assuming for the sake of argument that the Examiner's statements about network communications are at least indirectly disclosed in Bunte, this is an entirely different concept than the feature recited in claim 26. In contrast to a response time-out period, as proposed by the Examiner, claim 26 recites providing coordination between the portable data collection device and the remote units so that each unit agrees to transmit at a given time interval. This concept is not disclosed in Bunte. Accordingly, the rejection of claim 26 (amended to be in independent form) has been traversed and should be withdrawn.

The Examiner has rejected claim 27 on the ground that Bunte discloses an indicator light that shows a battery charge-state of the terminal. The indicator in Bunte is at the terminal and

shows the charge state of the terminal battery. (Bunte, Col. 5, lines 54-65). In contrast, claim 27 recites that the data collection device communicates with the data transmitting unit to “detect the remaining power in each unit” so it can be indicated to a user. In other words, in the system recited in claim 27 the main data collection device (similar to the terminal of Bunte) monitors the battery status of a different device – the wireless bar code scanning unit – which battery status is entirely unrelated to the battery status of the data collection device itself. Because Bunte does not disclose remote monitoring of battery charge status, the rejection of claim 27 as being anticipated by Bunte has been traversed and should be withdrawn.

Finally, the Examiner has rejected claim 29 on the grounds that Bunte discloses placing the components in a holster or belt that would provide some protection for the device. Claim 29 is directed to the physical structure of the data collection unit and recites that the unit has two separate sections having bosses for connecting the sections together, where the bosses are over molded with shock resistant material. Even if Bunte generally discloses a device configuration which would provide a degree of protection, it does not disclose providing a housing with the configuration recited in claim 29. Accordingly, the rejection of claim 29 as being anticipated by Bunte has been traversed and should be withdrawn.

Rejection of the claims under § 103:

Claims 2 and 3 stand rejected as being obvious over Bunte in view of U.S. Patent No. 5,921,270 to Barna. This rejection will be considered as being applied to claim 1, which has been amended to include the subject matter of canceled claim 2.

The Barna patent discloses a system in which keyboard overlay sheets are provided, each of which has a unique bar code. The bar code on the overlay is scanned to configure the

keyboard system with the appropriate key assignments for the scanned overlay. Neither Barna nor Bunte discloses associating a wireless bar code scanner with a portable data collection device as recited in amended claim 1. Although Barna discusses the general concept of associating one item with another by reading a bar code, it does not teach or suggest the concept of scanning a bar code that identifies a data collection device with a wireless scanner and then transmitting to the same data collection device the bar code number that had been scanned along with the identification of the scanning device itself as recited in claim 1. It also does not teach or suggest fixing the bar code to the data collection devices recited in claim 3. To the contrary, Barna teaches placing the bar code on the item (the keyboard overlay) to be associated with the data collection device.

Accordingly, even if it were obvious to combine the teachings of Bunte with Barna as suggested by the Examiner, the combination would not result in the invention recited in amended claim 1. Accordingly, applicants submit that the rejection of claims 1 and 3 as being obvious over Bunte in view of Barna has been traversed and should be withdrawn.

Finally, claim 24 stands rejected as being obvious over Bunte in view of U.S. Patent No. 6,039,258 to Durbin et al. This rejection will be considered as being applied to amended claim 16, which has been amended to include the subject matter of canceled claims 21 and 23-24.

The Examiner has cited the Durbin patent for its teaching of a touch-panel key display that can be configured with different keys and contends that it would have been obvious to use this in the system of Bunte. The Examiner further contends that Durbin teaches that the field of view can be extended to accommodate left or right handed users. (Durbin, Col. 11, lines 35+, Office Action, p. 6). However, the portion of Durbin cited by the Examiner that addresses handedness relates to the scanning field of view, not the arrangement of keys on the display.

Claim 16, as amended, recites that the processor “reconfig[ures] a position of the start scan key on the display to depict a start scan key for a right handed user and for a left handed user.” Thus, while Durbin may disclose the general concept of a reconfigurable keyboard, the combination of Durbin with Bunte proposed by the Examiner would not result a scanner with a reconfigurable keyboard display in which the keys are reconfigured to depict a start scan key for as appropriate for a right handed or left handed user.

Accordingly, applicants submit that the rejection of claim 16 as being obvious over Bunte in view of Durbin has been traversed and should be withdrawn.

New Claims 31-33:

The application has been amended to add new claims 31-33. New claims 31 and 33 depend from claims 1 and 26, respectively, and recite that the first data transmission protocol is Bluetooth as disclosed on page 15 of the specification. New claim 32 depends from claim 26 recites that the data collection device has a low power mode that can be entered when it is outside of a transmission time slot as disclosed on page 24 of the specification. No new matter has been added.

Applicants submit that these claims are allowable over the cited prior art for at least the same reasons as discussed above with respect to claims 1 and 26. In addition, neither Bunte, Barna, nor Durbin disclose using a Bluetooth protocol as recited in claims 31 and 33.

Conclusion

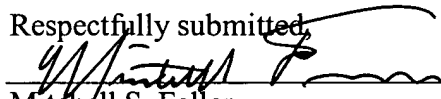
In view of the above amendments and remarks, each and every issue raised by the Examiner has been addressed and all of the rejections have been traversed. To the extent that

specific pending claims have not been specifically discussed, these claims depend from one of the claims addressed above and are allowable over the cited prior art for at least the same reasons as discussed with respect to the parent claims. It is believed that the application is now in condition for allowance and action to that end is respectfully requested. However, should the Examiner believe that further contact with the applicants' representative would advance the progress of this application, the Examiner is invited to telephone the undersigned at the number below.

Date:

1/31/03

Respectfully submitted,



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MARKUP VERSION SHOWING AMENDMENTS MADE

1. (Amended) A portable data collection device comprising:

- a display;
- a manual data entry circuitry;
- a processor for receiving entered data and for controlling the display;
- a first wireless communication circuit for receiving data using a first protocol over short range from at least one data transmitting unit; and
- a second wireless communication circuit using a second protocol for transmitting and receiving data over a long range from a host;

wherein the processor is receptive of identification data relating to the at least one data transmitting unit for field associating at least one data transmitting unit with the portable data collection device, the at least one data transmitting unit is a bar code reader and wherein the identification data comprises information on a bar code associated with the portable data collection device and a unique identification of the at least one data transmitting unit.

2. CANCELED

3. (Amended) The device according to claim 1 [2], wherein the bar code is affixed to the portable data collection device.

4. The device according to claim 1, wherein the processor is receptive of a unique identification of the at least one data transmitting unit through the manual data entry circuitry for field associating.

5. The device according to claim 1, further comprising a cradle for the at least one data transmitting unit and wherein the processor is receptive of the identification data relating to a cradled data transmitting unit for field associating.

6. The device according to claim 5, wherein the at least one data transmitting unit has a rechargeable battery therein and wherein the battery is recharged when the unit is cradled.

7-15 CANCELLED

16. (Amended) A data collection system comprising:

at least one data transmitting unit for scanning bar codes and for producing a decode signal representative of a scanned bar code and having communication circuitry for the wireless transmission of the decode signal over a short range using a first protocol; and

a portable data collection device comprising a display, manual data entry circuitry, a processor for receiving entered data and for controlling the display, a first communication circuit for receiving data from the at least one data transmitting unit using the first protocol over a short range and a second communication circuit using a second protocol for wireless transmitting and receiving of data over a long range from a host;

the processor being configured to controls the display to depict a keypad array of discrete keypad areas, each representing at least one of alphanumerics and icons on the display and corresponding to data to be entered by actuating same and wherein the processor reconfigures the array of alphanumerics and icons for different operations, the depicted keypad array including at

least one start scan key to initiate scanning on the at least one data transmitting unit, the processor reconfiguring a position of the start scan key on the display to depict a start scan key for a right handed user and for a left handed user.

17. The data collection system according to claim 16, wherein the at least one data transmitting unit comprises a light source, a scan element, a scan motor for moving the scan element, a photodetector, signal processing circuitry for receiving a signal from the photodetector, triggering circuitry for initiating a scan, and power management circuitry for controlling the light source, scan motor and signal processing circuitry to stagger the activation thereof upon the initiating of a scan by the triggering circuitry.

18. The data collection system according to claim 17, wherein the at least one data transmitting unit further comprises decode circuitry for decoding the signal received from the photodetector.

19. The data collection system according to claim 16, further comprising a headset receptive of a voice input for producing voice signals and having communication circuitry for the wireless transmission of the voice signals over a short range using the first protocol.

20. The data collection system according to claim 16, wherein the processor monitors the distance of the at least one data transmitting unit from the portable data collection device to indicate when the distance exceeds a given distance.

21. CANCELLED

22. (Amended) The data collection system according to claim 16 [21], wherein the portable data collection device has a cradle for docking at least one data transmitting unit.

23-24. CANCELLED

25. The data collection system according to claim 16, wherein the at least one data transmitting unit is associated with the portable data collection device and wherein the device communicates with each unit to lower the transmit power thereof.

26. (Amended) A data collection system comprising:
at least one data transmitting unit for scanning bar codes and for producing a decode signal representative of a scanned bar code and having communication circuitry for the wireless transmission of the decode signal over a short range using a first protocol; and
a portable data collection device comprising a display, manual data entry circuitry, a processor for receiving entered data and for controlling the display, a first communication circuit for receiving data from the at least one data transmitting unit using the first protocol over a short range and a second communication circuit using a second protocol for wireless transmitting and receiving of data over a long range from a host;

[The data collection system according to claim 16,] wherein the at least one data transmitting unit is associated with the portable data collection device and wherein the device communicates with each unit to agree to transmit at given time intervals.

27. (Amended) A data collection system comprising:

at least one data transmitting unit for scanning bar codes and for producing a decode signal representative of a scanned bar code and having communication circuitry for the wireless transmission of the decode signal over a short range using a first protocol; and

a portable data collection device comprising a display, manual data entry circuitry, a processor for receiving entered data and for controlling the display, a first communication circuit for receiving data from the at least one data transmitting unit using the first protocol over a short range and a second communication circuit using a second protocol for wireless transmitting and receiving of data over a long range from a host;

[The data collection system according to claim 16,] wherein the at least one data transmitting unit is associated with the portable data collection device and wherein the device communicates with each unit to detect the remaining available power in each unit to indicate power status to the user.

28. CANCELLED

29. A portable data collection device comprising: a display; manual data entry circuitry; a processor for receiving entered data and for controlling the display; a first wireless communication circuit for receiving data using a first protocol over short range from at least one data transmitting unit; a second wireless communication circuit using a second protocol for transmitting and receiving data over a long range from a host; and a housing for the display, manual entry circuitry, processor and communication circuits, wherein the housing has two

separate sections having bosses for connecting the sections together and wherein the bosses are overmolded with shock resistant material to provide a shock mount for components in the housing.

30. CANCELLED

New Claims:

--31. The system of claim 1, wherein the first protocol is Bluetooth.--

--32. The system of claim 26, wherein at least one data transmitting unit is configured to enter a low power mode when outside an associated transmit time interval.--

--33. The system of claim 26, wherein the first protocol is Bluetooth.—